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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,601	04/02/2004	I-pieng Peter Kao	SUP-003	3140

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EXAMINER

SURYAWANSHI, SURESH

ART UNIT	PAPER NUMBER
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2115

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/817,601

Applicant(s)

KAO, I-PIENG PETER

Examiner

Suresh K. Suryawanshi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/12/06 amendments.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-45 are presented for examination.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12, 17-26, 31-33 and 38-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Cohen (US Patent 6,957,286).

5. As per claim 1, Cohen discloses

notifying an intelligent endpoint of a boot event for a computer system [col. 7, lines 46-53; col. 8, lines 43-48; notifying the boot management device of a boot event by powering on the computer while holding the state changing button], the intelligent endpoint being connected to one of the computer systems, wherein the intelligent endpoint is a peripheral device [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-32; the hardware boot manager device]; and

deciding on an action for the boot event using the intelligent endpoint, wherein the action may affect or depend on a boot of another computer system [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-32; the hardware boot manager device is able to switch the operating system of the computational device, by switching between the hard drives or other hardware storage devices].

6. As per claim 17, Cohen discloses

a boot manager for assisting a booting platform of each of the computer systems [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-32; the hardware boot manager device assists in booting of each of the computer systems]; and

boot intelligence for storing information regarding boots of the computer systems, wherein the boot manager and the boot intelligence form a peripheral device [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-32; the hardware boot manager device is able to switch the operating system of the computational device, by switching between the hard drives or other hardware storage devices].

7. As per claim 31, Cohen discloses

a booting platform for a computer [col. 1, lines 25-34; col. 2, lines 12-30; different booting platforms for a computational device]; and

an intelligent endpoint operatively coupled to the computer via a system fabric, the intelligent endpoint managing at least a portion of a boot of the computer, wherein the intelligent endpoint is a peripheral device [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-32; the hardware boot manager device is able to switch the operating system of the computational device, by switching between the hard drives or other hardware storage devices].

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8. As per claims 2, 19 and 39, Cohen discloses that the boot event relates to platform configuration [col. 7, lines 46-53; col. 8, lines 43-48; notifying the boot management device of a boot event by powering on the computer while holding the state changing button].

9. As per claims 3, 20 and 40, Cohen discloses that the intelligent endpoint can determine which components in the computer system to boot and in what order the components should be booted [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-32; the hardware boot manager device is able to switch the operating system of the computational device, by switching between the hard drives or other hardware storage devices].

10. As per claims 4, 21 and 41, Cohen discloses that the boot event relates to multi-medium configuration [Fig. 2; the computer system is configured with floppy disk drive, hard disk drive and network etc.].

11. As per claims 5, 22 and 42, Cohen discloses that the intelligent endpoint could assist in decision-making based on protocols for a specific medium [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-45; the hardware boot manager device assists in booting of each of the computer systems based on two states: 1) hard drive, network and floppy are connected; 2) hard drive and network are connected and floppy drive is not connected].

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12. As per claims 6, 23 and 43, Cohen discloses that the boot event relates to file system and image format [col. 1, lines 25-34; different operating systems (such as Windows and Linux) have different file system and image format].

13. As per claims 7, 24 and 44, Cohen discloses that intelligent endpoint can determine which primitive structures are used and how the primitive structures are organized [col. 1, lines 25-34; different operating systems (such as Windows and Linux) have different primitive structures].

14. As per claims 8, 25 and 45, Cohen discloses that the boot event relates to post-boot considerations [col. 1, lines 25-34; different operating systems (such as Windows and Linux) have different post-boot considerations].

15. As per claim 9, Cohen discloses that post-boot consideration includes proper version control and protection [col. 1, lines 25-34; col. 2, lines 31-39; inherent to the system having different operating system in different storage devices to boot from].

16. As per claims 10 and 26, Cohen discloses that notifying the intelligent endpoint includes communication over a system bus or a system fabric [Fig. 2; col. 6, lines 10-30].

17. As per claim 11, Cohen discloses that the system bus or the system fabric conform to the PCI Express specification [Fig. 2; col. 6, lines 10-30; inherent to the system].

18. As per claim 12, Cohen discloses using a boot manager in the intelligent endpoint [col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; a boot management device].

19. As per claims 18 and 38, Cohen discloses that the boot manager is coupled to receive a boot event from the platform [Fig. 2; col. 6, lines 10-30; col. 7, lines 46-53; col. 8, lines 43-48].

20. As per claim 32, Cohen discloses that the booting platform includes a boot loader and a boot agent [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-45; the hardware boot manager device assists in booting and having a boot loader and a boot agent are inherent in a booting computer system].

21. As per claim 33, Cohen discloses that the intelligent endpoint includes a boot manager and boot intelligence [Fig. 2; col. 2, lines 20-26; col. 4, lines 63-67; col. 6, lines 10-30; col. 7, lines 28-45; the hardware boot manager device assists in booting of each of the computer systems based on two states: 1) hard drive, network and floppy are connected; 2) hard drive and network are connected and floppy drive is not connected and wherein each hard drive having a different operating system].

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 13, 27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (US Patent 6,957,286) in view of Cromer et al (US Patent 5,860,001¹; hereinafter Cromer).

24. As per claims 13, 27 and 34, Cohen discloses the invention substantially. Cohen does not disclose about a plurality of startup sequences. However, Cromer clearly discloses that a computer system could have a plurality of startup sequences [Fig. 6, 8, 9, 10 and 11; col. 1, lines 29-32; col. 2, lines 47-63]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to a computer system boot process. Moreover, the option of automate process of selection of a boot option based on a condition will certainly enhance the invention of Cohen.

25. Claims 14, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (US Patent 6,957,286) in view of Yoon et al (US Patent 6,088,794¹; hereinafter Yoon).

26. As per claims 14, 28 and 35, Cohen discloses the invention substantially. Cohen does not disclose about determining whether a plurality of hard disk drives are in normal state or in suspend state. However, Yoon clearly discloses [Fig. 5, 9; col. 2, lines 42-46; col. 3, lines 23-49]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to a boot process of a computer system. Moreover, clearly the option of selecting a hard disk drive for boot based on determination which one is in normal state and which one is in suspend state will enhance the invention of Cohen to provide a more reliable and user friendly boot system.

27. Claims 15, 29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (US Patent 6,957,286) in view of Davis (US Patent 5,937,063¹).

28. As per claims 15, 29 and 36, Cohen discloses the invention substantially. Cohen does not disclose about determining whether boot instructions are valid. However, Davis clearly discloses a secure boot process involving the step of boot instruction validation [Fig. 2; col. 3, lines 40-52;]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

¹ Prior art cited by applicant in the information disclosure statement (dated 4/02/04).

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invention was made to combine the cited references as both are directed to boot process of a computer system. Moreover, a routineer in the art would like to implement the validation of boot instruction for not only security purpose but also for a reliable boot process. Thus, clearly the centralized boot process of Cohen will be benefited.

29. Claims 16, 30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (US Patent 6,957,286) in view of James, Jr. et al (US Patent 6,240,519¹; hereinafter James).

30. As Per claims 16, 30 and 37, Cohen discloses the invention substantially. Cohen does not disclose about re-programming a non-volatile memory storing boot instructions. However, James clearly discloses that it is known in the art that a flash memory can be re-programmed where the flash memory contains boot instructions [col. 1, lines 7-11; col. 1, line 40 -- col. 2, line 15; col. 2, lines 25-38]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to boot process of a computer system. Moreover, the knowledge of the secure boot re-programming of a non-volatile memory in a computer system will clearly be utilized in the centralized boot process of Cohen. Thus, enhancing the invention of Hubacher with the facility of re-programming of a non-volatile memory storing boot instructions.

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suresh K. Suryawanshi whose telephone number is 571-272-3668. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sks

December 12, 2006



CHUN CAO
PRIMARY EXAMINER